CHAPTER 2

Significance

Introduction

The first topic to be investigated in a Special Resource Study is the significance of the resources that are under consideration. The NPS has developed criteria to evaluate the national significance of a site. The National Park Service Management Policies 2001 state that a resource is nationally significant if it meets all of the following requirements:

- **Resource Quality** – It is an outstanding example of a particular type of resource.
- **Interpretive Value** – It possesses exceptional value or quality in illustrating or interpreting the natural or cultural themes of our nation's heritage.
- **Potential for Use** – It offers superlative opportunities for public enjoyment or for scientific study.
- **Integrity** – It retains a high degree of integrity as a true, accurate, and relatively unspoiled example of the resource.

Nationally significant cultural resources include districts, sites, buildings, structures or objects that possess exceptional value or quality in illustrating or interpreting our heritage. This chapter on significance is an evaluation of the individual and collective historical and thematic national significance of the Battle of Homestead site, the Carrie Furnaces Nos. 6 and 7, and nearby closely related resources according to the criteria listed above.

Historical Significance and Themes

Extant cultural resources associated with the Homestead Works represent three broad threads in American history — *the role of engineering and technology in developing the American economy, labor's role in developing the American economy, and peopling places and community* — reviewed in order in this chapter, as their sequence reflects their chronology. These topics are incorporated within, although not identical to, themes and sub-themes in the *History in the National Park Service: Themes & Concepts* (2000).[5] Theme V, *Developing the American Economy*, incorporates "the activities of … workers, entrepreneurs, and managers, as well as the technology around them" as well as sub-topic (5) under this theme, *Labor Organizations and Protests*. Theme I, *Peopling Places*, refers to "…communities [that] have evolved according to cultural norms, historical circumstances, and environmental contingencies."

During the period from 1892 to 1951, the Homestead Works was a leader in technological innovation and the most productive steel mill in the Pittsburgh area, widely recognized as the leading steel center in the United States. Associated from 1883 to 1901 with one of America's leading steel barons and philanthropists, Andrew Carnegie, the Homestead Works became a part of U.S. Steel in 1901, the nation's first billion dollar corporation, and remained part of the "corporation" until its closure in 1986.

The critical events of July 1892 stand for both the high-water mark of craft unionism and the onset of the non-union period in the steel industry, from 1892 to 1936. Between 1936 and 1938, as Homestead's steel workers played a leading role in the Steel Workers Committee's (SWOC) effort to organize the steel industry, Homestead became a cradle of industrial unionism. During this period, the communities associated with the Works — Homestead, West Homestead and Munhall — reached their fullest development in size and in cultural expression. The events which brought closure to this period were the 1941 erection of a monument to strikers slain in the Battle of Homestead by the SWOC, an event which symbolized the triumph of industrial unionism; the expansion of the Homestead Works by the Defense Plant Corporation and concomitant destruction of ethnic neighborhoods in the "Ward district" during World War II; and the construction of the 1951 ore bridge at Carrie Furnaces Nos. 6 and 7, an addition that completed the modernization of Homestead's iron-making plant.

Industry and Technology: Homestead's Role in Developing the American Economy

The Homestead Works was established in 1881 by the Pittsburgh Bessemer Steel Company. Andrew Carnegie purchased the Homestead Works in 1883. Under Carnegie's dynamic leadership, the

Homestead Works grew to become the most productive steel mill in the Pittsburgh area by 1890 and the largest in the nation until about 1900.[6]

Carnegie's investments helped make Pittsburgh the steel capital of America by 1900. While the leadership of competitive capitalists like Carnegie and a tradition of engineering excellence partly explain the emergence of Pittsburgh, geographical factors also played a vital role. Changes in fuel and iron ore sources, which occurred during the 1880s and 1890s, created a shift in production from eastern to western producers. Eastern Pennsylvania iron and steel makers relied mostly on local ores and on anthracite for fuel. As coke was substituted for anthracite when blast furnace fuel and Lake Superior ores replaced local ores in the 1880s, Pittsburgh obtained a geographic advantage because of the city's proximity to the Great Lakes and to low-cost, high-quality Connellsville coke manufactured in southwestern Pennsylvania. By 1900, the Pittsburgh district manufactured 40% of the nation's iron and steel.[7]

After purchasing the Homestead Works, Carnegie dramatically transformed it from a Bessemer rail mill to a highly mechanized, fully integrated, heavy products mill. In rapid succession, Carnegie Steel Company installed three basic open-hearth furnace plants, blooming, slabbing and plate mills, structural mills, a wheel and axle works, and an armor plate forge. To ensure an adequate supply of iron for his open-hearth furnaces and thereby integrate the Homestead Works, Carnegie purchased the Carrie Furnace Company's iron works in 1898, which held two blast furnaces, Numbers 1 and 2. The Furnaces were situated across the Monongahela River from Homestead in Swissvale. To link them to steel making and shaping facilities at Homestead and thus more fully integrate the works, Carnegie built the massive Hot Metal Bridge in 1900-1901, which featured the heaviest span ever built at the time.[8]

The Homestead Works was an integrated steel mill containing facilities to smelt iron, make steel and roll the steel into finished shapes. Its tremendous growth came because Carnegie recognized the growing market for heavy structural steel, and was able to corner the market with his cost-cutting production methods. Under Carnegie, the Homestead Works was a leader in making the transition from iron to open-hearth steel in the production of structural shapes – principally beams for construction. By 1897 Carnegie Steel, with structural rolling operations solely at Homestead, controlled 49.37% of the structures market. Beams rolled at Homestead were used to build American skyscrapers, including the 1885 Home Insurance Building, the nation's first skyscraper, as well as for the many steel truss bridges around the country.

Another product line that spurred the growth of the steel mill was armor plate, for which Carnegie was able to obtain contracts with the U.S. Navy. The Homestead Works produced the armor plate that played a central role in the development of American sea power, including that for Commodore Dewey's flagship in the Battle of Manila Bay, the *U.S.S. Olympia*. When installed at Homestead in 1899, the extant 48" universal plate mill was the largest in the world.[9] Homestead continued to supply armor plate and other steel products to the U.S. Armed Forces through much of the twentieth century, equipping President Theodore Roosevelt's "Great White Fleet" and earning the title "arsenal of democracy." Homestead's historic relationship with the U.S. Navy led the federal government's Defense Plant Corporation to enlarge the works in 1941 by some 110 acres, one of the largest expansions of steel plants during the war.[10] The following resources, personality and corporation were involved with Homestead and illustrate its role in *Developing the American Economy* through their innovations in the field of steel industry and technology:

Carrie Blast Furnaces Nos. 6 and 7 represent technological innovations and improvements in furnace design developed to increase production. As built in 1906-1907, the design of Carrie was based on a set of technological innovations known as "hard-driving," in which more powerful blast engines, hotter blasts, larger blast furnaces, new raw materials storage and delivery systems and clean blast furnace gas were used to increase productivity. In addition, the furnaces were some of the first in the nation to be built specifically for the smelting of Mesabi iron ores. This design had a direct impact on the construction of other U.S. Steel blast furnace plants, most notably the furnace plant of the corporation's new Gary Works. Construction of the Gary Works commenced soon after the construction of Carrie 6 and 7, and the Gary facility adopted the same furnace lines and hot blast plant as those used at Carrie 6 and 7.[11]

Carnegie. Carnegie's empire was built on a simple formula: cut the costs of production, undercut the competition, corner the market, and profits will take care of themselves. Rooted in his Social Darwinist belief in the survival of the fittest and the desperate competitive struggle between steel firms in the 1880s and 1890s, this economizing drive was the foundation for Carnegie's management style

and his endless quest for more efficient production through new technologies and integration. It also defined his treatment of steel workers: long hours, low wages, bleak conditions, and anti-unionism all flowed from this basic economizing premise.[12]

Animated by this economizing drive, Carnegie revolutionized the steel industry. He introduced cost-accounting methods first developed by the Pennsylvania Railroad and hired savvy managers such as Charles Schwab, who later founded Bethlehem Steel. He achieved full integration of iron and steel making through his partnership with Henry Clay Frick, which placed at his disposal high-quality Connellsville coke at the price of production and by purchase of iron ore lands. In many cases "borrowing" from his competitors, he introduced high-volume, mechanized production technologies, including the practice of "hard-driving" at Carrie blast furnaces, and the "throughput" or continuous flow of materials system. And, with his defeat of the Amalgamated Association of Iron and Steel Workers in 1892, Carnegie rid his works of unionism, a force that threatened to drive up labor costs and challenge his control and the drive for economy that had characterized his operations.[13]

Cover of Leslie's Illustrated Weekly, 1892. Rivers of Steel.

By the turn of the twentieth century, Carnegie and his lieutenants had built the greatest steel empire in the world. Just as important, the "Carnegie spirit" of economizing had come to dominate the entire American steel industry.[14] With nothing more to accomplish and desiring to give away his vast wealth, Carnegie sold Homestead and all of his holdings to J.P. Morgan in 1901. Homestead and Carnegie's Monongahela Valley mills became the nucleus of the U.S. Steel Corporation, the nation's first billion-dollar company.

U.S. Steel institutionalized Carnegie's economizing policies. The "corporation," as it was commonly called, expanded production at Homestead with two new open hearths, construction of Carrie blast furnaces Nos. 3, 4, 5, 6 and 7, new shops and an expanded armor plate division. Modernization of facilities and the expansion of production at Homestead continued, reaching its peak at the onset of World War II with the massive Defense Plant Corporation expansion.[15]

Labor: Homestead's Role in Developing the American Economy

Far-reaching events in the history of the American labor movement occurred at Homestead during the 1892 to 1941 period. Few events in American labor history have attracted as much attention as the Homestead Lockout and Battle of Homestead in 1892. Journalists made it a cause celebre during the summer of 1892. Their reports roused the nation, and the events at Homestead had an impact on the Presidential election of 1892. The battle inspired discourses, poems and songs, and soon became a part of American folklore. It made Homestead a famous place in labor history, attracting the attention of sociologists John A. Fitch and Margaret F. Byington for their acclaimed work for the Pittsburgh Survey during the first decade of the twentieth century.[16] A more recent outpouring of historical monographs has enshrined Homestead in academic literature and made the battle "one of the most ... thoroughly researched strikes in American history."[17]

The Battle of Homestead - The dramatic events of the lockout, according to historian Paul Krause, "are among the most famous of American history," so the "savage and significant" story need not be retold in detail here. The work of Krause, Montgomery and other historians has drawn attention to the tremendous strength of craft unionism in Homestead during the 1880-1892 period. The Amalgamated Association of Iron and Steelworkers bargained as equals with Carnegie Steel, played a role in setting the pace of production at Homestead and was a strong force in local government. In this period, the Amalgamated – not Carnegie – was the dominant force at Homestead.[18]

The lockout that gripped Carnegie's Homestead Works from the beginning of July to the end of November 1892 put the Amalgamated movement to the test. Under a new manager, Henry Clay Frick, who had smashed strikes in the coal and coke fields of the Connellsville district, the company built fortifications around the Homestead Works. Frick proposed drastic reductions in wages for skilled workers and refused to deal with the Amalgamated union. On July 2, the company discharged all its workers and served notice that thereafter the Homestead Works would operate as a non-union mill.

Frick and Carnegie wanted to destroy the Amalgamated because the union controlled the pace of production at Homestead. Composed largely of skilled iron and steel workers, the Amalgamated stood in the way of management's desire to install the new open-hearth steel making technology at Homestead with the objective of increasing production.

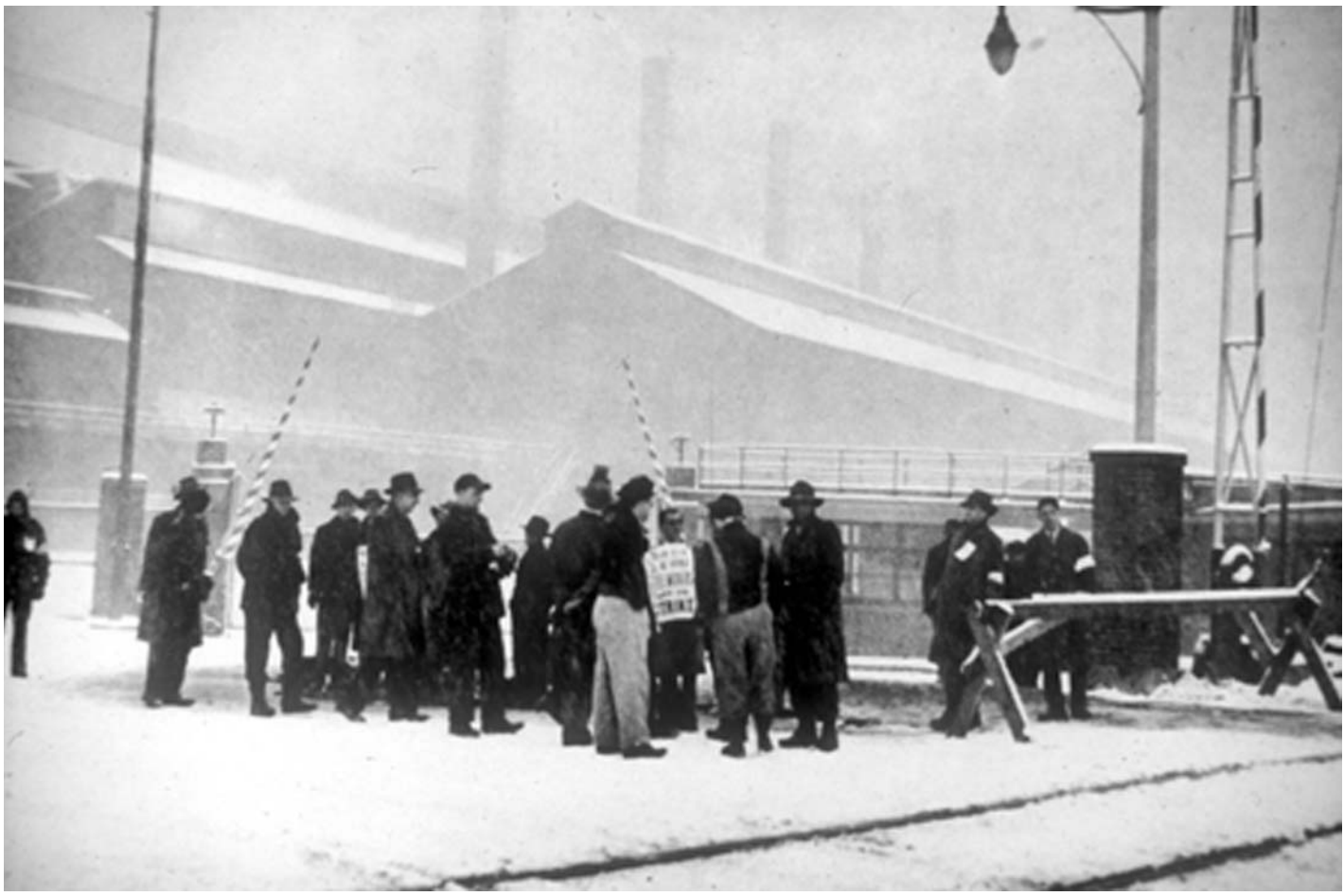
In response, Amalgamated lodges in Homestead rallied workers with mass meetings, elected an advisory committee of thirty-three members to direct the struggle and set up special committees to patrol the streets, watch for the importation of "scabs" and maintain law and order. In effect, the Advisory Committee, with its headquarters in the Bost building, became the government of Homestead.

Four days later, two barges filled with Pinkerton detectives arrived at the waterfront entrance to the Works, now known as "the landing site." Refusing to obey the advisory committee's instructions to depart, the Pinkertons held their positions along the landing site as hundreds of aroused Homesteaders gave battle. While Pinkertons fired through gun slits in the armor plating of their barges, the populace of Homestead assaulted the invaders with rifle fire, dynamite, flaming oil, cannon fire, and fireworks left over from the Fourth of July. Seven Homesteaders and three Pinkertons died in the shoot-out. Toward the end of the day, the Pinkertons surrendered, and as they were led from the landing site, they were forced to run a bloody gauntlet of angry men, women and children.

The Amalgamated won the Battle of Homestead, but as events unfolded, it lost the war for unionism due largely to the intervention of the Pennsylvania National Guard. Convinced that the sheriff of Allegheny County was unable to cope with the situation, Governor Robert E. Pattison ordered the deployment of the guard. On July 12, 1892, 8,000 soldiers under the command of General George Snowden began a 95-day occupation. This show of military might permitted civil authorities to regain control, and allowed Frick to restart the works with non-union labor. By November 24, the Homestead Works was in full production, and the Amalgamated voted to go back to work on Frick's terms.[19]

Thus, in a period of just under five months, organized labor fell from its high place to a position of powerlessness. This fall of the house of labor placed Carnegie Steel "in the saddle," and led to the elimination of the Amalgamated, first at Homestead and subsequently in the rest of the nation. At Homestead and in the nation's mills steel workers lost the right to join unions, bargain collectively and play a role in setting hours and working conditions. The loss not only ushered in the long non-union period in labor relations, but also brought a

1940s Strike. Rivers of Steel photograph.



new order of social relations in steel communities. Workers lost their influence in community politics and their capacity to speak freely, and became dependents of powerful steel companies.

Such was the state of labor during the non-union period from 1892 to 1936. Steel workers were subjected to the "Carnegie spirit" of economizing. Like the technological systems that they operated, they were subject to "hard-driving" and became simply a cost of production. Blast furnace plant workers, in particular, were driven unmercifully. They worked seven-day, twelve-hour shifts, with a twenty-four hour turn every other Sunday, in a hot and smoke-filled environment where foreman and gang pushers drove the crews as hard as the equipment for the achievement of production records. Such treatment led to physical and mental exhaustion, as well as frequent accidents.[20] The movement known as "welfare capitalism" brought some amelioration of the arduous and dangerous working conditions in the mills during the 1910s and 1920s. Elbert Gary, President of U.S. Steel, initiated the movement to establish the eight-hour day, which became common in the industry by 1923.[21]

Return of the Union - As Homestead was the scene for the events that brought the demise of labor in 1892, it was also the setting for organized labor's revival in the 1930s. Following the successful organization of the nation's coal miners under the banner of the United Mine Workers of America (UMWA), President John L. Lewis established the Congress of Industrial Organizations in 1935 to organize steel and other workers in an industrial union. The Steel Workers Organizing Committee (SWOC) was formed the following year with UMWA Vice-President Philip Murray as chairman. SWOC inaugurated its national organizing campaign with a rally at Homestead on July 5, 1936, the anniversary of the Battle of Homestead.[22] Thousands of steel workers joined the successful rally, highlighting it with a march to the unmarked graves of the strikers killed in the 1892 battle. As steel workers from other Monongahela Valley mills joined the movement, Myron Taylor, chairman of the board of U.S. Steel, recognized SWOC on March 2, 1937, and signed a collective bargaining agreement. Steel workers finally had their union back. To further celebrate their triumph, SWOC's Homestead local erected a monument along Eighth Avenue in 1941 honoring the martyrs of 1892.[23]

Community: Homestead's Social Institutions and Cultural Expressions

Residents speak of Homestead as a "company town" to express the large influence that Carnegie Steel and U.S. Steel had upon the development of the communities that grew up next to the steel mill. Yet, Homestead, West Homestead and Munhall were not classic company towns in the sense of Lowell, Massachusetts or hundreds of "coal camps" in the Appalachian coalfields. The steel company did not own all property in these steel towns, nor did it control every aspect of worker's lives. There was a certain sphere of freedom and autonomy outside the world of work. Yet, the towns (especially Homestead and Munhall) were heavily influenced by the "corporation" and, at times, dominated by it.

By and large, the influence of Carnegie Steel and U.S. Steel on the communities they spawned waxed and waned according to the power of labor. During the period before the Battle of Homestead, when the Amalgamated reigned, workers, rather than the company, controlled local politics and set the agenda for community affairs. During this period of the workers' republic, skilled, native-born, Protestant, European-Americans dominated — if not in numbers then in influence — and Homestead's communities varied little from thousands of other commercial and industrial towns across the nation.[24]

The face of Homestead's communities and their relationship to the steel company changed dramatically after the defeat of the union in 1892. As Carnegie took control, workers lost rights and power in the community just as they had lost the same inside the mill. In his 1907-1908 survey of Homestead's steel workers, which was published in 1910 as "The Steel Workers," John Fitch wrote of a "system of repression that stifles initiative and destroys healthy citizenship." He harshly criticized the steel corporation for imposing the twelve-hour, seven-day week on blast furnace workers, for it had destroyed family life and citizenship.[25]

With a tremendous demand for semi-skilled and unskilled labor, Homestead attracted great numbers of immigrants from Eastern Europe during the 1892 to 1921 period. A series of laws passed during the 1920s restricted immigration from these nations, but African-American migrants made up for the decline, arriving in great numbers after a 1919 strike, a dismal failure for organized labor. As a result, the population of the Homestead area grew from about 500 in 1890 to nearly 20,000 by 1920. These newcomers, primarily Catholic, Greek or Russian Orthodox, spoke different languages and had different cultures than those of the "native stock." Generally, immigrants from each particular nation or region lived in close proximity,

Russian Club, 8th Avenue. Rivers of Steel photograph.

developing distinct neighborhoods with their own churches, fraternal organizations and saloons. These ethnic neighborhoods were, for the most part, located below the railroad tracks in what was known as the "Ward" district. In this manner, they were able to carve out a sphere where they possessed some independence and, at the same time, adjust to the industrial order. As long as these unskilled, immigrant workers were docile, the steel company did little to directly impact their lives or communities.

During the twentieth century, Homestead and Munhall became a central focus for the numerous ethnic groups that settled and worked in the Homestead Works, as well as in surrounding boroughs. A large percentage of the mill's workforce was Slavic. Slovaks established an American Slovak Literary Club and the First Slovak Building and Loan Association. They built the beautiful St. Michael the Archangel Church in 1927. Polish immigrants built two churches in Homestead, and Rusyns (a nationality also known as Ruthenians emigrating from the Ukraine) built three churches and had a club and a "Rusin Peoples Home." The African-American community built at least four churches and lodges, including the Precious Jewel Masonic Lodge, one of the first Black Masonic organizations in the country. The Homestead Grays were a world-famous Negro League baseball team. Homestead's Jewish community grew to be one of the largest mill town Jewish communities in the Pittsburgh area. By 1927, there were 1,100 Jews in Homestead and at least two synagogues.[26]

As the years went by, Carnegie Steel and U.S. Steel tempered their authoritarian stance with paternalistic welfare programs designed to reduce labor turnover, gain the loyalty of workers and divert attention away from poor working conditions and labor organizers. Carnegie Steel's benevolence to the community was directed largely to the native stock neighborhoods above the railroad tracks. In 1894 a subsidiary of Carnegie Steel Company, the Carnegie Land Company, began to subdivide the City Farm area, a 144-acre tract, for the creation of a management/skilled worker neighborhood. Fine homes were built for the mill's top management on Eleventh Avenue. On this same tract, which was incorporated into the borough of Munhall in 1901, Carnegie made his most conspicuous gift to the community. Dedicated in 1898, the Homestead Carnegie Library was the great philanthropist's personal peace offering. Other individuals associated with Carnegie Steel made similar gifts: in 1903 Charles Schwab, who had been a superintendent of the works, presented the C.M. Schwab Industrial School, built at his expense in Homestead.

St. John's Church, Homestead Historic District. Rivers of Steel photograph.

After U.S. Steel purchased the Homestead Works in 1901, the corporation guided the development of Homestead communities with the same type of paternalistic policies. The corporation virtually controlled politics and local welfare and some public services programs. In 1910 U.S. Steel established a welfare department. Through this agency, the corporation underwrote playgrounds, picnics, sports clubs and even churches. The Carnegie Library also continued to exert a large influence in the community through its educational, recreational and cultural enrichment programs.[27]

The coming of unionization in the late 1930s gave workers bargaining power once more and established a new era of community relations. As New Deal Democrats replaced anti-union Republicans, local governments grew more responsive to the needs of workers. However, steel workers did not dominate community life in the manner their predecessors had before 1892. The attitude of dependence on the corporation for public services such as parks, schools and other community betterments continued.

The Homestead National Register District, particularly the Homestead Carnegie Library and the houses and churches found within the Carnegie Land Company, City Farm Plan neighborhood, depicts in architecture and landscape the cultural expressions and social institutions developed by the Homestead and Munhall communities during the 1892 to 1951 period. The principal cultural expressions of Homestead's ethnic neighborhoods were churches. In 1940 fifty churches were listed in a community directory. Many of these remain as remarkable works of architecture. They attest to the religious and ethnic diversity of Homestead as a whole and evoke a feeling that religion was an important part of life in the community.[28] Recently restored, the Homestead Carnegie Library is a potential NHL property, especially in light of the fact that no Carnegie library has received NHL designation and that this structure illustrates such strong personal ties to Andrew Carnegie.

In terms of layout and the architecture of housing, community resources at Homestead are typical of riverine steel mill towns in Pennsylvania, including Bethlehem along the Lehigh River, Cambria on the Conemaugh and McKeesport, Duquesne, Braddock and Clairton along the Monongahela.

Homestead Residents at St. John's Church. Rivers of Steel photograph.

Each had a simple hierarchy, from the giant mill along the river, to the parallel business district and the housing and other structures situated on the slopes. Some communities, including Homestead and Braddock, developed riverfront neighborhoods. Housing was utilitarian for workers, and row houses were fairly typical. Distinct ethnic neighborhoods developed in most of the towns.[29]

Homestead conforms to this general pattern, for the most part, but it is somewhat unique in one respect. The lower part of the Homestead and Munhall boroughs, specifically the strip of land between Ninth and Eleventh Avenues, became a center for the building of churches during the first half of the twentieth century. A concentration of seventeen religious buildings was erected here between 1892 and circa 1950.[30] While the churches of this area give Homestead a distinctive character, the loss of its ethnic neighborhoods in the riverfront or "Ward District" during the WW II era in favor of plant expansion diminishes the general level of integrity of its communities.

Resource Evaluation and Determination of Significance

The following descriptions explain the resources measured against the significance criteria defined in the Chapter 2 Introduction, above. These criteria included Resource Quality, Interpretive Value, Potential Use and Integrity.

Bost Building

The Bost Building is listed as an NHL for its association with the Battle of Homestead and retains a high level of integrity. Through its designation as an NHL, it has been determined to be nationally significant. However, its setting has been lost due to the clearance of the Homestead Works and other elements of the neighborhood surrounding the property. A summary of its significance includes:

- **Resource Quality —** The building is a singular resource and the only place at which the organizers of the strike/lockout that precipitated the Battle of Homestead met.
- **Interpretive Value —** The building will offer high value in illustrating and interpreting labor history: exterior and part of interior are undergoing restoration; interpretation will be provided.
- **Potential Use** — The building will be open to the public and operated as an interpretive facility.
- **Integrity** — The building has high integrity. The integrity of its setting has been lost due to urban clearance, however.

SWOC Monument

Erected by steel workers, the SWOC monument commemorates the 1892 Battle of Homestead and the 1941 return of the union to power—bookends of the non-union period.

- **Resource Quality —** The monument is a singular resource and uniquely commemorates union recognition, and is intertwined with the Homestead workers and their community.
- **Interpretive Value —** The monument commemorative text is legible and offers strong value in illustrating and interpreting labor history and its link to community.
- **Potential Use** — The monument is within a public space with high visibility and access.
- **Integrity** — The monument is relatively unchanged since its installation. The integrity of its setting is diminished with removal of the Homestead Works.

Battle of Homestead Landing site

The Battle of Homestead Landing site was denied NHL status because of its lack of physical integrity. Site features include an 1892 brick pump house building, which was present during the battle but modified from its 1892 appearance and configuration; approximately fifty circa 1883 wooden pilings, also present during the battle, which are visible just under the water at the river's edge; and an 1893 steel cylinder water tower.

While the Battle of Homestead Landing Site has lost individual integrity, the site offers high value in interpreting labor history, and the rehabilitated Pump House is accessible to the public. The significance of the site can be summarized as follows:

- **Resource Quality** – The site is a singular resource: the site of the Battle of Homestead.
- **Interpretive Potential** – Although there is a loss of integrity, the area is capable of communicating its significance.
- **Potential Use** –The Pump House and river overlook are accessible to visitors and are

intended to be integral parts of the Rivers of Steel visitor journey experience.

- **Integrity** – The site has lost integrity, due to its truncation by changes to the river wall. Comparison with engravings of the time shows that the land formerly was graded gradually to the river, providing a more direct connection to the river (and to the Pinkertons' vessels). However, the site is directly opposite the Carrie Furnaces 6 and 7, on the opposite bank of the river, and does retain visual connection to this major remaining artifact of the Homestead Works.

Carrie Furnaces 6 and 7

Following the demolition in the 1980s and 1990s of the Homestead Works and the other Carrie Furnaces, Carrie Furnaces 6 and 7 and the Hot Metal Bridge stand as the only remaining components of the Homestead Works.

The modernizations of the Carrie 6 and 7 plant in 1926 and 1936 were consistent with the further development and elaboration of "hard-driving" technologies by U.S. Steel engineers. In considering the integrity of this resource, it is important to recognize that by their nature, twentieth-century iron making facilities were continually modernized to increase productivity or adapt to the demands of new raw materials. As the plant stands today, lacking only its blowing engines, it is a good example of an American blast furnace plant that was a part of an integrated steel mill and developed in the first half of the twentieth century.

The plant retains all but one main component that was critical to its function as a blast furnace for an integrated steel mill: the blowing engines (although the blowing house remains). Over the years there has been some deterioration caused by the elements, including the collapse of the Carrie Furnace 7 cast house, but the remaining structures are in fair to good condition.

If Carrie is compared with the more intact Lehigh Plant of the Bethlehem Steel Corporation, now out of operation and undergoing study by the Smithsonian Institution for conversion to a Museum of Industrial History, or to USX's Edgar Thomson Steel Works at nearby Braddock, which is currently in operation, Carrie furnaces would not be considered the best and only example of these type of blast furnaces. However, it is a good example of technological innovation and hard-driving. Carrie has value because it still stands and can represent the importance of Homestead as an integrated steel mill. Currently, only one American blast furnace plant, the Sloss Furnaces in Birmingham, Alabama, has been designated a National Historic Landmark. Unlike Carrie, Sloss is a southern merchant foundry iron blast furnace plant that produced pig iron for the open market rather than for associated steel works, a very different type of operation. Since 70% of the nation's output of iron during the 1920s and 1930s was produced in integrated plants, Carrie is more representative of the dominant iron making technology in this period.

A survey of extant blast furnaces in 1996 showed that there are four furnace complexes in the United States that, like Carrie 6 and 7, were built before World War I and not significantly modernized after World War II. Like Carrie, these complexes include paired furnace stacks that were integrated with steel mills. In addition to Carrie 6 and 7, the furnace complexes are:

- Furnaces 1 and 2 of the Inland Steel Company in East Chicago,
- Furnaces 1 and 2 of the USX/Kobe Steel in Lorain, Ohio, and
- Furnaces 1 and 2 of the Wheeling-Pitt Steel Company in Steubenville, Ohio.[31]

These plants are currently in operation and the extent of renovations to their blast furnaces is not known. Other iron - or steel - making facilities that have been designated NHLs or park units include Tredegar Iron Works as part the Richmond National Battlefield Park in Virginia, Saugus Iron Works NHS in Massachusetts, Hopewell Furnace NHS in eastern Pennsylvania, the Cambria Iron Works NHL in Johnstown, Pennsylvania, and the Sloss Blast Furnaces NHL in Alabama. All of these facilities, except for Cambria, are from earlier periods (pre-1880s) and are examples of iron making, not steel. Besides Sloss and Saugus, none include blast furnaces and are not comparable.

In summary, assessment of the significance of the Carrie Furnaces includes:

- **Resource Quality** — Carrie 6 and 7 are a good example of blast furnaces from the era, but other examples exist in the nation that retain connection to steel works.
- **Interpretive Potential** — Because there is a loss of setting and the connection to the demolished Homestead Works is weak, the furnaces could provide interpretive and educational value only

if they are assisted through special programs and interpretive media.

- **Potential Use** — A high degree of intervention would be necessary to make the site capable of receiving visitors.

- **Integrity** — As an individual element of a steel plant, the furnaces have high integrity. Demolition of rest of the Carrie Furnaces site and Homestead Works resulted in loss of visual and functional connection to the mill of which the furnaces were an integrated component. The setting of the furnaces has lost integrity.

Hot Metal Bridge

The bridge is important because of its unique design and its association with Andrew Carnegie, who owned the Homestead Works when the construction of the bridge began. It was the heaviest span ever built at the time. Although the bridge is dwarfed by many heavier spans today, it remains the only bridge standing in the U.S. designed to carry molten iron, rather than passengers or freight, over a major waterway. The bridge retains a high degree of integrity although its setting has been altered by demolition that has occurred over the past decade. On the Homestead side, there is an operating steel mill nearby, although unrelated to the original mill, and on the Carrie side, there are many acres of cleared land between it and Carrie Furnaces 6 and 7.

- **Resource Quality** — The Hot Metal Bridge is an excellent and unique example of this type of resource.

- **Interpretive Value** — Because of loss of setting and connection to the demolished Homestead Works, the bridge can provide good interpretive value if assisted through on-site programs and interpretive media.

- **Potential Use** — Because of loss of setting and connection to the demolished Homestead Works, the bridge can provide good educational value for visitors if assisted through on-site programs and interpretive media. A high degree of intervention would be necessary to make the bridge safe and secure for use by the public.

- **Integrity** — Individually, the bridge has high integrity. Its setting has lost integrity due to the demolition of a significant portion of the Carrie Furnaces site that connected to the north end of the bridge and full demolition of the Homestead Works on the south side of the river. The Hot Metal Bridge stands alone and no longer connects the furnaces to a mill.

Homestead National Register Historic District

Despite the demolition of the Ward District, most of the extant resources associated with the Homestead community maintain a generally high level of integrity. For example the Homestead Carnegie Library has been restored, and the churches are well maintained. However, the decline of the community following the closure of the mill has adversely impacted some of the churches. Due to a shrinking congregation, St. John's Greek Catholic Church has been sold to individuals, and its fate is uncertain. For the same reason, the Hungarian Reformed Church has suffered from neglect. However, when compared to nearby Braddock and Clairton, which contain operating plants, the resources within the Homestead district fare well. Surprisingly, neighborhoods and buildings in those communities have suffered more than those in Homestead from neglect and decay. Additionally, sources of outside funding associated with a large enterprise zone and state assistance are being targeted to these resources. As assessment of the significance of the district includes:

- **Resource Quality** — The district is a good example of a community organized around and influenced by a particular industry and includes individual resources that are outstanding.

- **Interpretive Value** — The district offers high value in illustrating the nature of a steel company town, particularly due to the tangible presence of "peace offerings" made by the company following the battle.

- **Potential Use** — The district and its individual resources are easily made ready for visitors. Many are currently open to the public.

- **Integrity** — The district retains high integrity.

Determination of Significance

The resources considered in this study do not uniformly and fully meet the criteria for national significance. A summary of the findings related to each criterion is provided below.

- **Resource Type** — Collectively the resources form an outstanding ensemble of resources in the categories of labor and community at Homestead and are good examples of resources linked to

the steel industry.

Individually, not all resources exemplify outstanding examples of a particular resource type. The Battle of Homestead Landing site, Bost Building, Hot Metal Bridge, and Homestead Carnegie Library are unique examples in their categories. The Carrie Furnaces 6 and 7 and the Homestead National Register Historic district, while good examples, are not unique in their categories.

- **Interpretive Value** — Collectively the resources and their story offer high interpretive value in illustrating three broad themes in American history with particular focus on labor history. Those themes include: *the role of engineering and technology in developing the American economy, labor's role in developing the American economy, and peopling places and community.*

  Individually some of the resources offer exceptional interpretive value for illustrating *labor's role in developing the American economy*, including the Bost Building, the Homestead National Register Historic District, Carrie Furnaces 6 and 7,and the Battle of Homestead Landing site.

- **Opportunities for Public Enjoyment or Scientific Study** — Collectively the resources could provide high educational value for visitors if assisted through on-site programs, interpretive tours and media.

  Individually some resources are easily made visitor-ready and accessible, including the Bost Building, the Battle of Homestead Landing site, and the Homestead National Register Historic District through existing planned actions or new initiatives. Other resources such as the Carrie Furnaces 6 and 7 and the Hot Metal Bridge would need a high degree of intervention to make them accessible and visitor-ready.

- **Integrity** — The Bost Building, an NHL that was the site of a key series of events in labor history, meets all four significance criteria. The Carnegie Library, the Steel Workers Organizing Committee Monument and the Homestead National Register Historic District retain great site integrity, although their setting and relationship with the Homestead Works has been lost due to the plant's demolition. Similarly, the Carrie Furnaces 6 and 7 and the Hot Metal Bridge have retained individual integrity, although their setting has diminished integrity due to demolition of a large part of the Carrie Furnaces site and the Homestead Works. Finally the Battle of Homestead site has lost its setting integrity due to the alteration made to the riverfront, the demolition of the Homestead Works and the new development on the site of the Works.

These significance criteria are summarized for each resource at the end of this section in Table 1: Application of Special Resource Study National Significance Criteria.

Conclusion

Today the Homestead Steel Works is best remembered for two important occurrences in the nation's history:

- Homestead was the site of one of America's greatest and most far-reaching labor wars, the "Battle of Homestead" in 1892, and related developments during the nearly 50 years on the non-union period in the steel industry.

- The operation of the integrated plant was pivotal in the development of the American iron and steel industry during the 1892 to 1951 period, helped to identify Pittsburgh as the capital of "Big Steel" and influenced steel making throughout the country.

These are two distinct but interconnected stories. The Battle of Homestead is a nationally significant story about the struggle of workers to maintain their rights against industry supported by government. The 1892 Bost Building, 1892 Battle of Homestead Landing site, and 1941 Steel Workers Organizing Committee monument represent the role of labor at Homestead in developing and regulating the American economy. These resources are clearly associated with the labor movement and organized workers who challenged the hegemony of steel barons and corporate structures in 1892 and 1936-1937. The Bost Building was designated an NHL in 1999.

The second somewhat larger story is about steel making in the Pittsburgh area — the importance of Big Steel to our nation, the concept of hard driving and technological advances to boost production, and the associated culture and immigrant communities. For many generations, from the 1890s through the 1970s, the name Pittsburgh was associated with steel making in the United States. Some would say to tell the story of steel, it must be told in the vicinity of Pittsburgh.

Carrie Furnaces 6 and 7, the Hot Metal Bridge and the Homestead Historic District are important remnants of that industry. Carrie is the only blast furnace in the Pittsburgh area still standing that has not been altered to suit today's standards. Carrie Furnaces in combination with the Hot Metal Bridge tell an important part of the Homestead Works story and the much bigger Pittsburgh story. The Homestead National Register Historic District provides a context and a backdrop for the nationally important labor events that took place in the Homestead vicinity.

Individually, the resources (except the Bost Building) associated with the former Homestead Works do not meet the significance criteria for inclusion in the National Park system. When considered as an ensemble, however, this collection of distinct resources is an outstanding example of the development of industry, labor and community; has the potential to offer superlative opportunities for public education and appreciation of this history; and has elements that retain integrity commensurate with the ever-changing nature of the industry.

Table 1: Application of Special Resource Study National Significance Criteria

	Resource is an outstanding example of a particular type of resource.	Resource possesses exceptional value or quality in illustrating or interpreting the natural or cultural themes of our nation's heritage.	Resource offers superlative opportunities for public enjoyment or for scientific study.	Resource retains a high degree of integrity as a true, accurate and relatively unspoiled example of the resource.
The Bost Building	The building is a singular resource and the only place at which the organizers of the strike/lockout that precipitated the Battle of Homestead met.	The building will offer high value in illustrating and interpreting labor history: exterior and part of interior are undergoing restoration; interpretation will be provided.	The building will be open to the public and operated as an interpretive facility.	The building has high integrity. The integrity of its setting has been lost due to urban clearance.
Battle of Homestead Landing Site	The Landing Site is a singular resource and the only place on which the Battle of Homestead took place. While its loss of integrity impairs its illustrative potential, it is a highly appropriate place for commemoration of the event.	Because of loss of integrity to the site itself, as well as loss of the site's setting due to demolition of the Homestead Works, site can provide good interpretive value if assisted through on-site programs and interpretive media.	Because of loss of integrity to the site itself, as well as loss of the site's setting site due to demolition of the Homestead Works, site can provide good educational value for visitors if assisted through on-site programs and interpretive media.	Site has integrity of location but has lost integrity of other landscape characteristics.
Carrie Furnaces 6 and 7	Carrie 6 and 7 are a good example of blast furnaces from integrated steel plants of pre-WWII but have lost their setting and connection to demolished Homestead Works. Three other essentially similar examples exist nationwide that retain their connections to steel works.	Because of loss of setting and connection to demolished Homestead Works, furnaces can provide high interpretive value if assisted through on-site programs and interpretive media.	Because of loss of setting and connection to demolished Homestead Works, furnaces can provide good educational value for visitors if assisted through on-site programs and interpretive media. A high degree of intervention would be necessary to make the site visitable by the public.	As an individual plant, furnaces have high integrity. Demolition of rest of Carrie Furnaces site and Homestead Works resulted in loss of visual and functional connection to the mill of which the furnaces were an integrated component. Setting has no integrity.
The Hot Metal Bridge	The Hot Metal Bridge is an excellent example, although it has lost its setting and connection to demolished Homestead Works.	Because of loss of setting and connection to demolished Homestead Works, bridge can provide good interpretive value if assisted through on-site programs and interpretive media.	Because of loss of setting and connection to demolished Homestead Works, bridge can provide good educational value for visitors if assisted through on-site programs and interpretive media. A high degree of intervention would be necessary to make the bridge visitable by the public.	Individually, bridge has high integrity. Setting has no integrity due to demolition of most of Carrie Furnaces site and Homestead Works. Bridge stands alone and no longer connects furnaces to a mill.
Homestead National Register Historic District	The district is a good example of a community organized around and influenced by a particular industry, and includes individual resources that are outstanding.	The district offers high value in illustrating the nature of a company town, particularly due to the tangible presence of "peace offerings" made by the company following the battle.	The district and its individual resources are easily visitable. Many are currently open to the public.	The district retains high integrity.
Ensemble of Resources	Considered together, the steel, labor and community resources represent all elements of these integrated stories and provide a good, illustrative example.	Considered together, the steel, labor and community resources provide a critical mass of elements to illustrate the integrated themes of industry, labor history and development of community.	Considered together and if well supported by other agencies, the steel, labor and community resources can provide outstanding opportunities for education and public use.	Although the ensemble of resources can have no greater integrity than the individual components, considered together, the steel, labor and community resources represent all the basic components of these themes.